

Air Quality Permitting Statement of Basis

August 23, 2007

Tier I Operating Permit No. T1-060315

Basic American Foods, Blackfoot, ID Facility ID No. 011-00012

Prepared by:

Zach Klotovich, Permit Writer

DRAFT FOR PUBLIC COMMENT

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Acronyms, Units, and Chemical Nomenclature

acfm actual cubic feet per minute AFS AIRS Facility Subsystem

AIRS Aerometric Information Retrieval System

AQCR Air Quality Control Region

ASTM American Society for Testing and Materials

BACT Best Available Control Technology

Btu British thermal unit CAA Clean Air Act

CFR Code of Federal Regulations

CO carbon monoxide

DEQ Department of Environmental Quality

dscf dry standard cubic feet

EPA Environmental Protection Agency

gpm gallons per minute

gr grain (1 lb = 7,000 grains) HAPs Hazardous Air Pollutants

hp horsepower

IDAPA A numbering designation for all administrative rules in Idaho promulgated in accordance with the

Idaho Administrative Procedures Act

km kilometer lb/hr pound per hour m meter(s)

MACT Maximum Available Control Technology

MMBtu Million British thermal units

NESHAP Nation Emission Standards for Hazardous Air Pollutants

NO₂ nitrogen dioxide NO_x nitrogen oxides

NSPS New Source Performance Standards

O₃ ozone

PM Particulate Matter

PM₁₀ Particulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers

ppm parts per million

PSD Prevention of Significant Deterioration

PTC Permit to Construct
PTE Potential to Emit

Rules Rules for the Control of Air Pollution in Idaho

scf standard cubic feet

SIC Standard Industrial Classification

SIP State Implementation Plan

 $\begin{array}{lll} SM & synthetic minor \\ SO_2 & sulfur dioxide \\ SO_x & sulfur oxides \\ T/yr & Tons per year \end{array}$

μg/m³ micrograms per cubic meter
UTM Universal Transverse Mercator
VOC volatile organic compound

1. PURPOSE

The purpose of this memorandum is to explain the legal and factual basis for this draft Tier I operating permit in accordance with IDAPA 58.01.01.362.

The Department of Environmental Quality (DEQ) has reviewed the information provided by Basic American Foods regarding the operation of its facility located near Blackfoot, ID. This information was submitted based on the requirements to submit a Tier I operating permit application in accordance with IDAPA 58.01.01.300.

2. FACILITY DESCRIPTION

The Basic American Foods (BAF) Blackfoot Plant includes a food dehydrating plant and a co-located research and development laboratory related to vegetable dehydrating and product development. The Blackfoot plant produces dehydrated food products using a variety of drying and dehydration processes. Products are dried by contact with heated air. Drying air is heated either by direct-firing with natural gas or indirectly using steam heat exchangers. Steam for plant operations is provided by Boiler Numbers 1, 2 and 3.

3. FACILITY/AREA CLASSIFICATION

This facility is a major facility as defined by IDAPA 58.01.01.008.10 because it emits or has the potential to emit a regulated air pollutant(s) in amounts greater than or equal to major facility threshold(s) listed in Subsection 008.10. Refer to Section 6.2 of this document for a complete emissions inventory of the air pollutants emitted by this facility.

This facility is not a designated facility as defined by IDAPA 58.01.01.006.30 because the facility employs fossil-fuel boilers with a combined heat input of less than 250 MMBtu per hour. Total boiler heat capacity is 171 MMBtu/hr.

This facility is not a major facility as defined by IDAPA 58.01.01.205 (40 CFR 52.21(b)(1)) because it does not emit or have the potential to emit a regulated criteria air pollutant in amounts greater than or equal to 250 tons per year.

The Standard Industrial Classification (SIC) defining the facility is 2034 which represents establishments primarily engaged in artificially dehydrating fruits and vegetables, including "potato flakes, granules, and other dehydrated potato products." The Aerometric Information Retrieval System (AIRS) facility classification is A.

The facility is located near Blackfoot, ID, which is classified as unclassifiable for all regulated criteria pollutants. There is not a Class I area(s) within 10 kilometers (km) of the facility. This facility is located in Air Quality Control Region (AQCR) 61 and Universal Transverse Mercator (UTM) Zone 12.

A review of the site location information included in the permit application indicates that the facility is not located within 50 miles of a state border, however, it is located within 50 miles of the Shoshone-Bannock Tribes. Therefore, the Shoshone-Bannock Tribes will be provided an opportunity to comment on the draft Tier I operating permit during the comment period.

4. APPLICATION SCOPE

This project is exclusively a renewal of the facility's existing Tier I permit. No changes to the facility's current Tier I permit have been proposed at this time.

5. SUMMARY OF EVENTS

| June 12, 2006 | DEQ received application |
|-----------------|---|
| July 26, 2006 | DEQ determined application complete |
| July 27, 2007 | DEQ issued draft permit for facility review |
| August 17, 2007 | DEQ received comments from BAF regarding draft permit |

5.1 Permitting History

| December 24, 1975 November 12, 1982 April 27, 1995 | PTC Letter, issued December 24, 1975 PTC Letter, issued November 12, 1982 PTC No. 011-000012, issued April 27, 1995 |
|--|---|
| December 11, 2002 | Initial Tier I Operating Permit No. 011-00012, issued December 11, 2002 |
| March 22, 2004 | PTC No. P-040300, issued March 22, 2004 |
| August 23, 2004 | Consent Order issued, Case No. E-010007 dated August 20, 2004 |
| September 16, 2005 | PTC No. P-050301, issued September 16, 2005 (replaced PTC No. 040300 issued March 22, 2004) |
| October 4, 2005 | Tier I Operating Permit No. T1-050308, issued October 4, 2005 |
| December 6, 2005 | BAF requested closure of the consent order for Case No. E-010007 |
| January 23, 2006 | DEQ terminated the consent order for Case No. E-010007 |

6. PERMIT ANALYSIS

6.1 Basis of Analysis

The following documents were relied upon in preparing this memorandum and the Tier I operating permit:

- PTC No. P-050301 with accompanying Statement of Basis, issued September 16, 2005
- Tier I Operating Permit No. T1-050308, issued October 4, 2005
- Tier I Operating Permit application received June 12, 2006
- IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho
- Guidance developed by the U.S. Environmental Protection Agency (EPA) and DEQ

6.2 Emissions Description and Emissions Inventory

Table 6.1 summarizes total estimated facility-wide annual emissions from non-fugitive emissions units.

Table 6.1 EMISSION INVENTORY – ENTIRE FACILITY¹

| Table 0.1 EMISSION INVENTORY - ENTIRE PACIETY | | | | | |
|---|--------|-----------|--------|--------|--|
| CO | NO_x | PM_{10} | SO_2 | VOC | |
| (T/yr) | (T/yr) | (T/yr) | (T/yr) | (T/yr) | |
| 233 | 235 | 134 | 160 | 7.5 | |

Excluding plant heater fugitive emissions (per 40 CFR 52.21(b)(1)(iii)) and fugitive dust. Data is from Table 3-1 in the Tier I application.

7. REGULATORY ANALYSIS

7.1 IDAPA 58.01.01.369 – Tier I Operating Permit Renewal

Tier I operating permits being renewed are subject to the same procedural requirements, including those for public participation, affected states review, and EPA review, that apply to initial Tier I operating permit issuance.

7.2 New Source Performance Standards (NSPS) – 40 CFR 60

The provisions of 40 CFR 60 Subpart Dc apply to Boiler 2. New applicable requirements have been identified since the underlying PTC was issued. With reference to Boiler 2 and the combustion of residual oil, construction commenced after February 28, 2005. Boiler 2 is therefore subject to the new PM standard of 40 CFR 60.43c paragraph (e)(1), and the new performance testing requirement of 40 CFR 60.45c(a). A performance test was conducted June 6-8, 2006, which demonstrated compliance with the 0.030 lb/MMBtu particulate emission standard. The results of the EPA Method 5B test were 0.011 lb/MMBtu.

7.3 National Emission Standards for Hazardous Air Pollutants (NESHAPS) – 40 CFR Parts 61 & 63

No MACT or NESHAP rules apply because the Blackfoot Plant is not a major source of Hazardous Air Pollutant Emissions.

7.4 Compliance Assurance Monitoring (CAM) – 40 CFR Part 64

Boilers 1, 2, and 3 are exempt from the requirements under 40 CFR Part 64. Boiler 3 does not meet the applicability criteria and Boilers 1 and 2 are exempt under 64.2(b) since the Tier I permit requires the use of an SO₂ CEMS (i.e., a continuous compliance determination method) when combusting residual or distillate fuel oil.

• The CAM exemption under 64.2(b)(1)(vi) applies to Boilers 1 and 2 with regard to SO₂ as long as the Tier I permit (i.e., Part 70 permit) specifies that an SO₂ CEMS or Method 6b (i.e., continuous compliance determination methods per 40 CFR 60 Subpart Dc) must be used whenever distillate or residual fuel oil is combusted. Distillate oil monitoring based on fuel sampling and receipts, which is allowed under 60.42c(g) and (h), are not considered to be a "continuous" compliance determination methods, and for this reason they are not included in the permit as allowable options under the NSPS requirements. If BAF later desires to use fuel sampling or receipts instead of the CEMS for monitoring distillate oil, a PTC modification would be necessary; this exemption from Part 64 would no longer apply and the CAM requirements would need to be addressed as part of that modification.

8. PERMIT CONDITIONS

This section describes only the changes made to the permit as a result of this permitting action. A few changes were made from T1-050308, issued October 4, 2005.

Some of the facility-wide conditions were re-ordered to match DEQ's updated Tier I permit template. Permit Condition 2.20 was removed from the permit. The condition stated that the "permittee shall comply with the requirements of IDAPA 58.01.01.785-788, *Rules for Control of Incinerators.*" The renewal application says the incinerator at the facility was used to destroy documents but has been rendered inoperable.

Permit Condition 2.15, that identified specific test methods, was also removed from the facility-wide conditions because it is no longer part of DEQ's standard facility-wide conditions.

Permit Condition 2.14, regarding sulfur content of distillate fuels, was revised to add the sulfur limit for residual fuel oil and the standard requirement that "the permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis."

Permit Condition 3.1.2 was added to include the NSPS particulate matter standard for boiler 2, which came into affect after PTC No. P-050301 was issued.

Permit Conditions 3.13.3 and 3.13.4 were revised to make it clear that boilers 1 and 2 do not need to be ducted through the wet scrubber when burning natural gas.

The compliance plan was updated to document activities that have occurred since the initial Tier I permit was issued.

9. INSIGNIFICANT ACTIVITIES

The insignificant activities identified by BAF in the application are included in the permit along with the applicable regulatory citation for those activities that were determined insignificant based on size or production rate in accordance with IDAPA 58.01.01.317.01(b)). The insignificant activities list was updated to reflect the list provided in the renewal application.

10. ALTERNATIVE OPERATING SCENARIOS

The facility did not request any alternative operating scenarios.

11. TRADING SCENARIOS

The facility did not request any trading scenarios.

12. COMPLIANCE SCHEDULE

12.1 Compliance Plan

The compliance plan included in the original Tier I operating permit, issued December 11, 2002, was updated to note that permit application required by the plan has been received, and application was determined complete. DEQ has not yet issued a permit to address the issues identified in the compliance plan and associated permit application. The permit application was put in a backlog of

permitting projects due to a lack of resources to process the application. BAF has submitted Tier II permit applications for their Rexburg and Shelley facilities in addition to the Blackfoot facility. DEQ plans to issue a Tier II permit to the Rexburg facility first, and use that permit as a template for the Shelley and Blackfoot facilities.

12.2 Compliance Certification

Basic American Foods-Blackfoot is required to periodically certify compliance in accordance with General Provision 21. The facility shall submit an annual compliance certification for each emissions unit to DEQ and EPA, in accordance with IDAPA 58.01.01.322.11. The compliance certification report shall address the compliance status of each emissions unit with the terms and conditions of this permit.

13. PERMIT REVIEW

13.1 Regional Review of Draft Permit

DEQ provided the draft permit to its Pocatello regional office on July 19, 2007. The regional office did not have any comments regarding the draft permit.

13.2 Facility Review of Draft Permit

DEQ provided the draft permit to Basic American Foods - Blackfoot for review on July 27, 2007. Basic American Foods provided comments on the draft permit August 17, 2007.

13.3 Public Comment

DEQ will provide the draft permit for public comment. A review of the site location information included in the permit application indicates that the facility is not located within 50 miles of a state border, however, it is located within 50 miles of the Shoshone-Bannock Tribe's Fort Hall Reservation. Therefore, the Shoshone-Bannock Tribes will be provided an opportunity to comment on the draft Tier I operating permit during the comment period.

14. ACID RAIN PERMIT

This facility is not an affected facility as defined in 40 CFR 72 through 75; therefore, acid rain permit requirements do not apply.

15. REGISTRATION FEES

This facility is a major facility as defined by IDAPA 58.01.01.008.10; therefore, registration and registration fees in accordance with IDAPA 58.01.01.387 apply. The facility is in compliance with registration and registration fee requirements.

16. RECOMMENDATION

Based on the Tier I operating permit application and review of state rules and federal regulation, staff recommends that DEQ issue draft Tier I Operating Permit No. T1-060315 to Basic American Foods for its Blackfoot food dehydration facility. This permit renews the facility's existing Tier I operating permit. The permit was made available for public comment as required by IDAPA 58.01.01.364. The project does not involve PSD permitting requirements.

APPENDIX A - RESPONSE TO COMMENTS

Basic American Foods Comments Regarding Draft Tier I Permit

| Permit Condition | Requirement | Requested Change | Justification | DEQ Response |
|------------------|--|--|--|---|
| Table 1.1 | Column headed "Permit Condition" | Eliminate the column | It has no use in this location. | The column header was changed to "Permit Section" and the section numbers for the section s of the permit that contain specific permit conditions regulating the source were inserted |
| Table 1.1 | In the column headed "Emission Control(s)", the reference, "Venturi type wet scrubber system used whenever Boilers 1 and 2 are combusting fuel oil." | Change to read " whenever Boiler 1 or Boiler 2 are combusting" | The scrubber must be operated whenever <u>either</u> boiler combusts fuel oil. | The change was made. |
| 2.1 | "All reasonable precautions shall be taken" | Please clarify what is the corresponding compliance demonstration method. | BAF keeps records of such dust-control activities as applying water and sweeping or hosing down vehicle traffic areas (Permit Condition 2.2). Does the log book constitute the demonstration of compliance with Permit Condition 2.1? (It could also be used to demonstrate noncompliance.) BAF has not received any fugitive dust complaints (Permit Condition 2.3). Does the lack of complaints constitute the demonstration of compliance? Does conducting a quarterly facility-wide inspection (Permit Condition 2.4) constitute the demonstration of compliance? | As noted in Table 2.1, the monitoring and recordkeeping requirements that are used to demonstrate compliance with Permit Condition 2.1 are contained in Permit Conditions 2.2, 2.3, 2.4, and 2.11. The combination of compliance with the monitoring and recordkeeping requirements demonstrates compliance for Permit Condition 2.1. |
| 2.5 | No Person shall allow | As with Permit Condition 2.6, the IDAPA citation after this requirement should state that this permit condition is a "state-only" requirement. | Like Permit Condition 2.6, this permit condition is a state-only requirement. | The citation for Permit Condition 2.5 was changed to identify it as a "state-only" condition. |
| 2.9.2 | (Bullet formatting issue) | Correct bullet formatting for paragraphs following the main paragraph. | | The bullets were reformatted. |
| 2.14 | Sulfur Content | Include ASTM Grade 6 fuel oil | BAF now utilizes residual/#6 fuel oil. | The facility-wide condition for fuel sulfur content was expanded to include the residual oil fuel sulfur content limits from IDAPA 58.01.01.727. |

| Permit Condition | Requirement | Requested Change | Justification | DEQ Response |
|--|---|---|---|---|
| 2.10 | The permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. | Please change to read "within 60 days" alternately Precede the requirement with "Except as noted elsewhere in this permit" | Maintains consistency with the earlier Tier I permit and Tier I Permit Condition 3.35, taken from the underlying PTC. Tier I Permit Condition 3.35, taken from the underlying PTC, is an exception to Permit Condition 2.10. | DEQ agrees with the comment. Permit Condition 2.10 was modified to say, "Except as specified elsewhere in this permit, the permittee shall submit a compliance test report" |
| Table 3.1 | The heading for Table 3.1 actually says " Table 0.1 " | Correct the heading | | The heading was corrected. |
| Table 3.1 | In the column headed "Emissions Control Device", the reference, "Venturi type wet scrubber system used whenever Boilers 1 and 2 are combusting fuel oil." | Change to read "whenever Boiler 1 <i>or</i> Boiler 2 are combusting" | The scrubber must be operated whenever <u>either</u> boiler combusts fuel oil (Same as the second comment and justification for related to Table 1.1. | The language was changed to "or". |
| Comments related to Se included in the Tier I per With reference the new PM standard of 4 In accordance v plan. The requirements of Per previous di Condition 3.13.3 currentl this problem. | Added PM emission limit from 40 CFR 60.43c(e)(1) as Permit Condition 3.1.2. The NSPS PM performance test requirements were included at Permit Condition 3.20.4, since permit condition 3.20 was already titled Monitoring, Compliance and Performance Test Methods and Procedures for PM – Boiler 2 – NSPS. Included the approved alternative opacity monitoring plan as Attachment A to the permit, and referred to it in Permit Condition 3.22. Permit Condition 3.23.1 was modified to say that the BAF must comply with the NSPS opacity monitoring requirements or the alternative provided in Attachment A. | | | |
| Insert new Permit Condition 3.13.3 | Does not currently exist | When Boiler 1 combusts distillate or residual oil, Boiler 1 shall exhaust through the stack that serves the venturi scrubber. When Boiler 1 combusts natural gas, Boiler 1 may exhaust through its own stack. | Per previous discussion with DEQ, BAF intends to install a separate stack to serve Boiler 1 when Boiler 1 combusts natural gas. The proposed language is consistent with language in existing Condition 3.13.3 and the proposed modification following immediately below. | This change was made. |

| Permit Condition | Requirement | Requested Change | Justification | DEQ Response |
|---|--|---|---|---|
| Renumber existing Condition 3.13.3 to 3.13.4 Perhaps a way to incorpor section headed "Additiona underlying PTC. | When Boiler 2 combusts distillate or residual oil, Boiler 2 shall exhaust through the stack that serves Boiler 1 . When Boiler 2 combusts natural gas, Boiler 2 may exhaust through its own stack. at these comments would be to real Applicable Requirements" at the | When Boiler 2 combusts distillate or residual oil, Boiler 2 shall exhaust through the stack that serves the venturi scrubber. When Boiler 2 combusts natural gas, Boiler 2 may exhaust through its own stack. ference them in the "Summary Descript end of Section 3. That way, the current be | Per previous discussion with DEQ, BAF intends to install a separate stack to serve Boiler 1 when Boiler 1 combusts natural gas. The proposed language makes clear that Boiler 2 must exhaust through the scrubber (not the other stack for Boiler 1) whenever it combusts distillate or residual oil. ion" at the front of Section 3 and then add a new body of Section 3 would still synchronize with the | This change was made. The comments/changes were incorporated into the permit as subconditions so the numbering did not have to be altered. |
| 4.1.1 | The process weight PM limitation applies to each emissions unit/process identified in Table 4.1. | Reword to state "The process weight PM limitation applies to the collection of emissions units/processes identified in Table 4.1." | The process weight calculation applies to the entire process per Permit Condition 4.1, which states, " where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour." | The requested change was made. |
| Section 5, Paragraph 2 of "Summary Description" for Process B | Process B produces dehydrated potato products. This process consists of two parallel process lines that operate jointly. The raw materials put into the process are cooked potatoes and food additives, including sulfites. Process B can operate up to 8,760 hr/yr. There are no alternate operating scenarios. | Please eliminate the sentence that states "This process consists of two parallel process lines that operate jointly." | This is proprietary information that is not necessary to an understanding of emissions from the process. | The requested change was made. |
| 5.1.1 | The process weight PM limitation applies to each emissions unit/process identified in Table 5.1. | Reword to state "The process weight PM limitation applies to the collection of emissions units/processes identified in Table 5.1." | The process weight calculation applies to the entire process, not to the individual emissions units (See comment regarding Permit Condition 4.1.1.). | The requested change was made. |
| Section 6, Paragraph 2 of "Summary Description" of Process C | Process C produces dehydrated food products. The raw materials put into the process include cooked potatoes, previously dehydrated foods, and food additives, including sulfites. Process C can operate up to 8,760 hr/yr. There are no alternate operating scenarios. | Please reword the second sentence to state "The raw materials put into the process include raw and cooked foods, previously dehydrated foods, and food additives, including sulfites. | Process C includes foods other than potatoes. | The requested change was made. |

| Permit Condition | Requirement | Requested Change | Justification | DEQ Response |
|-------------------|--|--|--|--|
| 6.1.1 | The process weight PM limitation applies to each emissions unit/process identified in Table 6.1. | Reword to state "The process weight PM limitation applies to the collection of emissions units/processes identified in Table 6.1." | The process weight calculation applies to the entire process, not to the individual emissions units (See comment regarding Permit Condition 4.1.1.). | The requested change was made. |
| 7.2, 7.3, and 7.7 | One-time requirements that have been completed. | Please add a "Summary Description" at the beginning of this section and move these items into it in narrative form. | These are one-time requirements that have been fulfilled. They should no longer be listed as applicable requirements. | The change was note made. DEQ left the requirements as they were in the original Compliance Schedule so the status of each requirement can be easily identified. |
| Section 9 | Non-Applicable Requirements | Please cut and paste from BAF's application. | BAF's application contains a more complete listing of non-applicable requirements then the draft permit contains. | The entire list was not included because some of the requirements listed in the application are applicable, but were identified in the application as environmentally insignificant, such as the requirement to register and pay fees. The code for 40 CFR Part 63 was changed to "j – the facility is not a major source of HAP emissions" because some Subparts could become applicable if BAF were a major source of HAP emissions. |

Basic American Foods Comments Regarding Statement of Basis for Draft Tier I

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|---|---------------------|-------------------------|--------------------------------------|-----------------------------------|-----------------------------------|
| | Permit Condition | Requirement | Requested Change | Justification | DEQ Response |
| ĺ | 5.1 | Permit History | Include statement that BAF requested | Provides a more complete history. | The permit history was amended as |
| | | | closure of the Consent Order on | | requested. |
| | | | 12/6/05 and that DEQ closed the | | |
| | | | Consent Order on 1/23/06 (See | | |
| | | | attachments.) | | |